

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 21 OCT 2005

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Applicant's or agent's file reference PU030212	FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/US2004/009176	International filing date (day/month/year) 25.03.2004	Priority date (day/month/year) 21.07.2003	
International Patent Classification (IPC) or national classification and IPC H04N5/76			
Applicant THOMSON LICENSING S.A. et al			

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☐ sent to the applicant and to the International Bureau a total of sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 19.10.2004	Date of completion of this report 20.10.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Fragua, M Telephone No. +49 89 2399-5875 

**INTERNATIONAL PRELIMINARY REPORT
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International application No.
PCT/US2004/009176

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-9 as published

Claims, Numbers

1-24 as published

Drawings, Sheets

1/3-3/3 as published

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing *(specify)*:
 - ☐ any table(s) related to sequence listing *(specify)*:
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing *(specify)*:
 - ☐ any table(s) related to sequence listing *(specify)*:

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-24
	No: Claims	
Inventive step (IS)	Yes: Claims	1-24
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-24
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement.

1. The application relates to a method and apparatus for detecting signal conditions for compressed information streams.
2. Document US-A-2002/0064369 represents the closest prior art.
US-A-2002/0064369 discloses a method and apparatus for detecting signal quality conditions for video recording systems in order to eliminate poor or non-existent video sections from previous recorded video. The system evaluates detected synchronization pulses (vertical and horizontal) and determines that a predetermined number of faults in a given period of time of such pulses correspond with invalid video signals. The system outputs a signal indicating the signal status.
3. **Problem:**
The above approach can yield false positive detections of invalid video signals in several modes of compressed video streams that include dummy or auxiliary frames with no synchronization information between valid frames like alternate-mode or trick-MPEG-mode.
4. **Solution:**
The solution proposed in independent claims 1, 12 and 14 can be considered as Novel and Inventive (Art. 33(2), 33(3) PCT) based on the feature, that the system is able to detect alternate-mode/trick-mode conditions and to analyse the header of the frames, and outputs an indication of valid signal when both an alternate/trick-mode condition and at least one valid frame are detected during the same predefined search window.
5. Neither the document US-A-2002/0064369 nor the rest of the documents cited in the International Search Report suggest by themselves individually or in combination the solution proposed here. Document EP-A-1 148 729 cited as "Y" in the International Search report describes the insertion of valid headers before selected object headers in MPEG data streams. Document US-A-5 982 830 cited as "A" in the International Search report describes a synchronization system for MPEG frame decoders. No one of them discloses or suggest the outputting of a validity signal when the above both conditions are detected within a given search window.

Claims 2-11, 13 and 15-24 are dependent on claims 1, 12 and 14 respectively and as such also

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meet the requirements of the PCT with respect to novelty and inventive step.